CLAIMS

What is claimed is:

1.   In a portable computer system comprising a digital signal

5   processor (DSP) and a main processor, a method for establishing a wireless

connection between said portable computer system and a wireless network,

said method comprising the steps of:

a) scanning a plurality of broadcast channels used by said wireless

network, wherein said step of scanning is performed under direction of said

10   DSP while said main processor is in a low power mode;

b) determining whether a broadcast channel is acceptable for said

wireless connection, wherein said step of determining is executed by said DSP

while said main processor remains in said low power mode;

c) waking up said main processor provided a broadcast channel

15   acceptable for said wireless connection is identified; and

d) identifying to said main processor said broadcast channel acceptable

for said wireless connection.

2.   The method as recited in Claim 1 wherein step b) comprises the

20   step of:

b1) comparing to a threshold a measure of signal strength of a signal

received over said broadcast channel, wherein said threshold is for defining a

signal strength acceptable for said wireless connection.

3. The method as recited in Claim 2 further comprising the steps of:

identifying a number of broadcast channels acceptable for said wireless connection; and

sorting said number of broadcast channels according to their respective

5 measure of signal strength.

4. The method as recited in Claim 3 further comprising the steps of:

e) selecting from said number of broadcast channels a broadcast channel having the highest measure of signal strength; and

10 f) establishing said wireless connection using said broadcast channel selected in said step e), wherein said step of establishing is performed under direction of said main processor.

5. The method as recited in Claim 1 wherein said step a) further

15 comprises the step of:

a1) disregarding certain broadcast channels used by said wireless network.

6. The method as recited in Claim 1 wherein said wireless network is

20 a Mobitex wireless communication system.

7. The method as recited in Claim 1 wherein said step c) further comprises the step of:

c1) repeating said steps a) and b) at periodic time intervals until said

25 broadcast channel acceptable for said wireless connection is identified.

8.   The method as recited in Claim 1 wherein said step a) is automatically initiated when a previously established wireless connection between said portable computer system and said wireless network is lost.

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9.   The method as recited in Claim 1 wherein said step a) is automatically initiated when said portable computer system is powered on and an acceptable broadcast channel for said wireless connection is not acquired.

10   10.   A portable computer system comprising:

a bus;

a wireless transceiver coupled to said bus;

a main processor coupled to said bus; and

a digital signal processor (DSP) coupled to said bus, said DSP for

15   executing a method for establishing a wireless connection between said portable computer system and a wireless network, said method comprising the steps of:

a) scanning a plurality of broadcast channels used by said wireless network, wherein said step of scanning is performed while said main processor

20   is in a low power mode;

b) determining whether a broadcast channel is acceptable for said wireless connection, wherein said step of determining is executed while said main processor remains in said low power mode;

c) waking up said main processor provided a broadcast channel

25   acceptable for said wireless connection is identified; and

d) identifying to said main processor said broadcast channel acceptable for said wireless connection.

11. The portable computer system of Claim 10 wherein said step b) of
5 said method comprises the step of:

b1) comparing to a threshold a measure of signal strength of a signal received over said broadcast channel, wherein said threshold is for defining a signal strength acceptable for said wireless connection.

10 12. The portable computer system of Claim 11 wherein said method further comprises the steps of:

identifying a number of broadcast channels acceptable for said wireless connection; and

sorting said number of broadcast channels according to their respective
15 measure of signal strength.

13. The portable computer system of Claim 12 wherein a broadcast channel having the highest measure of signal strength is selected from said number of broadcast channels and used for said wireless connection.

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14. The portable computer system of Claim 10 wherein said step a) of said method further comprises the step of:

a1) disregarding certain broadcast channels used by said wireless network.

15.   The portable computer system of Claim 10 wherein said wireless network is a Mobitex wireless communication system.

5   16.   The portable computer system of Claim 10 wherein said step c) of said method further comprises the step of:

c1)   repeating said steps a) and b) at periodic time intervals until said broadcast channel acceptable for said wireless connection is identified.

10   17.   The portable computer system of Claim 10 wherein said step a) of said method is automatically initiated when a previously established wireless connection between said portable computer system and said wireless network is lost.

15   18.   The portable computer system of Claim 10 wherein said step a) of said method is automatically initiated when said portable computer system is powered on and an acceptable broadcast channel for said wireless connection is not acquired.

20   19.   In a portable computer system comprising a digital signal processor (DSP) and a main processor, a method for establishing a wireless connection between said portable computer system and a wireless network, said method comprising the steps of:

a)   scanning a plurality of broadcast channels used by said wireless

25   network, wherein said step of scanning is performed under direction of said

DSP while said main processor is in a low power mode and wherein said step of scanning is automatically initiated in response to a triggering event;

b) said DSP comparing to a threshold value a measure of signal strength of each signal received over said plurality of broadcast channels,

5 wherein said threshold is for defining a signal strength acceptable for said wireless connection;

c) said DSP waking up said main processor provided a broadcast channel acceptable for said wireless connection is identified, and otherwise said DSP repeating said steps a) and b) until a broadcast channel acceptable

10 for said wireless connection is identified; and

d) said DSP identifying to said main processor said broadcast channel acceptable for said wireless connection.

20.   The method as recited in Claim 19 wherein said step b) comprises

15 the steps of:

b1) said DSP identifying a number of broadcast channels acceptable for said wireless connection; and

b2) said DSP ranking said number of broadcast channels according to their respective measure of signal strength.

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21.   The method as recited in Claim 20 wherein said method further comprises the steps of:

e) said main processor selecting from said number of broadcast channels a broadcast channel having the highest measure of signal strength;

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f) said main processor establishing said wireless connection using said broadcast channel selected in said step e).

22. The method as recited in Claim 19 wherein certain broadcast
5   channels used by said wireless network are disregarded.

23. The method as recited in Claim 19 wherein said wireless network is a Mobitex wireless communication system.

10   24. The method as recited in Claim 19 wherein said triggering event is loss of a previously established wireless connection between said portable computer system and said wireless network.

25. The method as recited in Claim 19 wherein said triggering event is
15   lack of acquisition of a broadcast channel for said wireless connection when said portable computer system is powered on.